Claims

What is claimed is:

1. A structure for implementing an integrated conductor and capacitor in a surface mounted device (SMD) package comprising:

a first pair of contacts contained within the SMD package for mating engagement with a first pair of corresponding SMD package contacts;

a second pair of contacts contained within the SMD package for mating engagement with a second pair of corresponding SMD package contacts;

a conductor extending between said first pair of contacts and contained within the SMD package; and

a capacitor defined between said second pair of contacts and contained within the SMD package.

2. A structure for implementing an integrated conductor and capacitor as recited in claim 1 further includes an additional one or pair of integral capacitors for providing additional capacitance to ground to decouple common mode noise from the power planes.

3. A structure for implementing an integrated conductor and capacitor as recited in claim 2 further includes an additional one or pair of third contacts contained within the SMD package for mating engagement with a corresponding SMD package third contact and wherein said additional one or pair of integral capacitors is defined between a respective one of said third contacts and one of said second pair of contacts and contained within the SMD package.

4. A structure for implementing an integrated conductor and capacitor as recited in claim 1 wherein said first pair of contacts are outer contacts and said second pair of contacts are inner contacts, located between said first pair of contacts.

5. A structure for implementing an integrated conductor and capacitor as recited in claim 4 wherein said conductor is a generally U-shaped member extending between said first pair of contacts and contained within the SMD package.

6. A structure for implementing an integrated conductor and capacitor as recited in claim 5 wherein said capacitor includes a pair of posts respectively supported by said second pair of contacts, each post including at least one outwardly extending plate; and said respective plates extending in parallel.

7. A structure for implementing an integrated conductor and capacitor as recited in claim 1 includes a dielectric material surrounding said conductor and said capacitor.

8. A structure for implementing an integrated conductor and capacitor as recited in claim 7 wherein said dielectric material includes a selected one of the group of dielectric materials including NPO, X7R, X5R, C0G, and YTV.

9. A structure for implementing an integrated conductor and capacitor as recited in claim 1 includes a first dielectric material surrounding said conductor and a second dielectric material surrounding said capacitor.

10. A structure for implementing an integrated conductor and capacitor as recited in claim 9 wherein said first dielectric material is a dielectric material having selected impedance properties for high speed operation and wherein said second dielectric material includes a selected one of the group of dielectric materials including NPO, X7R, X5R, C0G, and YTV.

11. A structure for implementing an integrated conductor and capacitor in a surface mounted device (SMD) package comprising:

a first outer pair of contacts contained within the SMD package for mating engagement with a first pair of corresponding SMD package contacts;

a second inner pair of contacts contained within the SMD package between said first outer pair of contacts for mating engagement with a second pair of corresponding SMD package contacts;

at least one third contact contained within the SMD package between said second inner pair of contacts for mating engagement with a respective corresponding third SMD package contact;

a conductor extending between said first pair of contacts and contained within the SMD package;

a first capacitor defined between said second pair of contacts and contained within the SMD package; and

a second capacitor defined between a respective one of said at least one third contact and one of said second pair of contacts and contained within the SMD package.

12. A structure for implementing an integrated conductor and capacitor as recited in claim 11 wherein said conductor is a generally U-shaped member extending between said first pair of contacts and contained within the SMD package.

13. A structure for implementing an integrated conductor and capacitor as recited in claim 11 wherein said first capacitor includes a pair of posts respectively supported by said second pair of contacts, each post including at least one outwardly extending plate; and said respective plates extending in parallel.

14. A structure for implementing an integrated conductor and capacitor as recited in claim 11 wherein said second capacitor includes at least one of said pair of posts respectively supported by said second pair of contacts including at least one additional spaced apart outwardly extending plate, and a generally L-shaped member supported by one said third contact having a portion extending in parallel with said at least one additional spaced apart outwardly extending plate.

15. A structure for implementing an integrated conductor and capacitor as recited in claim 11 includes a dielectric material surrounding said conductor and said first and second capacitors.

16. A structure for implementing an integrated conductor and capacitor as recited in claim 15 wherein said dielectric material includes a selected one of the group of dielectric materials including NPO, X7R, X5R, C0G, and YTV.

17. A structure for implementing an integrated conductor and capacitor as recited in claim 11 includes a first dielectric material surrounding said conductor and a second dielectric material surrounding said first and second capacitors.

18. A structure for implementing an integrated conductor and capacitor as recited in claim 17 wherein said first dielectric material is a dielectric material having selected impedance properties for high speed operation and wherein said second dielectric material includes a selected one of the group of dielectric materials including NPO, X7R, X5R, C0G, and YTV.